A Study of Strategic Interventions in Effectively Promoting Maternal and Child Health (MCH) in India

Synopsis
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1. Introduction

Maternal and child health (MCH) remains a critical area for global health, particularly in emerging economies like India, where cultural, infrastructural, and economic factors heavily influence healthcare access and outcomes (Hamal et al. 2020). Maternal health refers to women's health and well-being during pregnancy, childbirth, and postnatal. It includes various physical, mental, emotional, and social health aspects to ensure a positive and fulfilling experience for women and their babies (WHO, 2023). Maternal mortality is the *"death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the time and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes"* (WHO, 2020). Maternal Mortality Ratio (MMR) is the number of maternal deaths per 100,000 live births (WHO, 2021). It is used as a criterion to assess the quality and accessibility of medical care in a country.

The Sustainable Development Goals (SDGs), espoused by the United Nations (United Nations, 2015), outline a global framework to achieve a better and more sustainable future for all. One of these goals is SDG 3: Ensure healthy lives and promote well-being for all at all ages. Within SDG 3, Target 3.1 focuses explicitly on maternal health, aiming to *"reduce the global maternal mortality ratio to less than 70 per 100,000 live births"* by 2030. (United Nations, 2015). While India has significantly improved the MCH, many gaps persist. Recent data shows India is far from reaching these goals (Souza et al., 2024). India is one of the ten countries contributing 60% of maternal and infant mortality (WHO, 2020). Despite government initiatives and international support, significant gaps persist in improving MCH. Non-Governmental Organizations (NGOs) have played a significant role, either alone or in collaboration, in alleviating voids in delivering healthcare services

(Boddewyn, & Doh, 2011; Kritz and Batsa, 2020). They have emerged as important partners for development in emerging economies (Utuk et al., 2014; Rath, 2019). The complexities of MCH determinants are intertwined with the need for multi-sectoral/cross-sector collaboration (Najafizada et al., 2017). NGOs are at the forefront of delivering essential services such as healthcare, education, clean water, sanitation, and emergency relief in disaster-affected areas. They have contributed significantly to MCH outcomes through women's groups and community monitoring initiatives that have empowered women to improve their interaction with health systems (Hamal et al., 2018). Their service pathways include demonstrating practical innovations, disseminating knowledge, and partnering with governments (Story et al., 2017). With outreach being central to their activities in the last mile, NGOs have built community repo at the grassroots, and they can provide healthcare to inaccessible areas. GoI has recognized the NGO's growing prominence, innovation, and grassroots-driven nature. About 25 percent of NGOs provide health services in rural areas, and 50% cater to rural and urban areas (Das et al., 2021). These organizations contribute around 2.1% to the country's health expenditure, primarily through grants from governments and foreign sources, emphasizing the importance of their grassroots reach in providing preventive and promotive healthcare services (Das, 2022). They provide basic health information and encourage people to seek and receive medical care (Clarke, 1998; Gizaw, Astale, and Kassie, 2022). International development agencies like USAID, McArthur, Jhapeigo, JICA, Bill & Melinda Gates Foundation, and United Nations Population Fund (UNFPA) have acknowledged the role of grass root NGOs in implementing innovative interventions and promoting community participation, further reinforcing the importance of NGOs in filling the gaps in public health provision (Bendix and Schultz, 2018).

An important factor in the success of MCH interventions for intended beneficiaries- birthing mothers, their family members, and their communities is their perception. Perception is a cognitive process through which the brain organizes, interprets and gives meaning to sensory information. It enables understanding and interacting with the environment, guiding behaviour and shaping the world's subjective experiences (Rogers, 2017). Sociocultural, demographic factors and past health experiences shape beneficiaries' perception. How beneficiaries perceive MCH intervention can significantly influence how they are accepted and practised. For several reasons, studying the perception of beneficiaries of MCH is essential. It can provide valuable feedback for adjustments to meet end-user expectations, as poorly designed interventions may inadvertently limit positive outcomes. It helps assess the acceptability of interventions, which can improve MCH (Musabyimana et al., 2018). Understanding beneficiaries' perceptions also brings out potential barriers to implementation, including sociocultural factors and technological challenges (Gopalakrishnan et al., 2020). Overall, beneficiary perspectives are essential for developing effective, culturally appropriate, and sustainable MCH interventions.

This research investigates the strategic interventions implemented by NGOs in India to promote MCH, focusing on the interplay between cultural context and beneficiary perceptions. The study examines how these factors influence interventions' design, implementation, and perception of beneficiaries.

Given the wide diversity of NGO interventios, the objectives guiding this study are thus formulated to address:

Objectives of the Study

- To analyze the MCH interventions implemented by NGOs

- To explore cultural and social contexts that shape MCH interventions
- To understand beneficiaries' perceptions regarding MCH interventions
- To propose a conceptual model integrating sociocultural and stakeholder interrelations for MCH interventions based on the perception of beneficiaries

In line with the objectives of the study and to understand the sociocultural dynamics of MCH interventions and the perception of beneficiaries towards them, the following research questions are framed:

Research Questions

1. What specific interventions do NGOs implement for MCH?
2. How does the socio-cultural context shape the strategies of NGOs implementing MCH interventions?
3. How do beneficiaries perceive MCH interventions implemented by NGO?

2. Literature Review

Even though healthcare is the primary responsibility of the Government, the World Bank reiterated that healthcare is highly underfunded in India (Rathi, 2017; Vishnoi, 2020). Furthermore, improvement in healthcare requires enhancement in socioeconomic conditions, which are often found to be challenging (Mavalankar, 2005; Gordon et al., 2020; Srivastava et al., 2020). Governments worldwide have undertaken different interventions to address the high MMR, but such interventions have achieved limited success. In this context, Ghosh and Chakraborti (2010) and Sanadgol (2022) argue that government investments alone cannot eradicate developmental and healthcare challenges.

GoI has recognized the NGO's growing prominence, innovation, and grassroots-driven nature. They provide basic health information and encourage people to seek and receive

medical care (Clarke, 1998; Gizaw, Astale, and Kassie, 2022). NGO staff understand the community and possess the skill sets to pursue participatory and people-centred forms of development, effectively addressing the unmet healthcare needs of citizens. Due to their flexibility, community-centred focus, and innovation, NGOs can swiftly adapt to changing healthcare needs, design culturally relevant interventions, and experiment with innovative approaches. In partnership with healthcare institutions and government NGOs, they enhance access to services, address psychological and financial constraints, and support patients and caregivers (Jayaraman & Fernandez, 2023; Dindi, 2022). By complementing existing MCH programs, NGOs ensure these interventions are effective and accessible, especially for disadvantaged groups (Sengupta & Nundy, 2005). They also emphasize increasing the uptake and quality of antenatal care, expanding facility-based delivery, and implementing efficient postnatal care, all of which impact maternal health. (Sengupta & Nundy, 2005; Shah et al., 2022).

Previous studies have documented the challenges and successes of various MCH interventions (Bhatia et al., 2021; Desai et al., 2020; Sharma et al.,2020; Singh et al., 2021). Although effective interventions exist to promote maternal and reproductive health, gaps in knowledge remain, especially around how MCH interventions may take place in various contexts in practice (Kendall & Langer, 2015; Ward et al., 2023). While interventions aim to enhance access to MCH, cultural factors significantly influence service utilization (Kagawa-Singer et al., 2014; Napier et al., 2017).

As observed in emerging economies, global health strategies often neglect cultural dimensions, supporting individualistic frameworks over collectivist, family-centred approaches (Aubel and Chibanda, 2022). Research highlights that as healthcare providers and beneficiaries come from different cultural backgrounds, their differences may result in

beneficiaries perceiving the care they receive as poor in quality, even if the technical aspects of the care are adequate. Such perceptions can weaken trust in healthcare providers, potentially leading to reduced engagement with healthcare services (Coast et al., 2014). These findings emphasize the need for culturally tailored interventions, ensuring that healthcare practices align with the values, beliefs, and expectations of the communities being served.

Despite the evidence supporting culturally sensitive health interventions, gaps persist in understanding the nuanced role of cultural and social systems in shaping health-seeking behavior in MCH. Existing frameworks like the Health Belief Model focus on individual perceptions, often ignoring how collective family and community dynamics shape these perceptions. This research addresses these gaps by exploring how cultural norms, family support, and community engagement influence the adoption of MCH interventions, leading to better health-seeking behavior. This gap is more pronounced in the Indian context, where pregnancy is often viewed as a natural or God-given event, reducing the perceived need for external healthcare support. Understanding how these cultural factors shape the MCH interventions and the perception of beneficiaries can be crucial to improving health outcomes.

3. Theoretical Approach

The theoretical approach underpinning this study comprises three theories- Stakeholder Theory (ST), Social Cognitive Theory (SCT), and Health Belief Model (HBM). Each theory contributes to understanding distinct dimensions of health-seeking behaviour, offering valuable insights into individual, familial, societal, and institutional dynamics. This theoretical approach establishes the foundation for analyzing how cultural, structural, and psychological factors influence beneficiaries' engagement with MCH interventions.

Stakeholder theory (Freeman, 1984) considers the interests and relationships of various organizational stakeholders, which can be groups or individuals who can affect or are affected by an organization's actions. The theory posits that organizations should consider the interests of all stakeholders while making decisions. In NGOs, the stakeholders are government, donors, beneficiaries, and the community. The stakeholders in this study include birthing mothers, community members, government health workers, and NGO staff. The engagement and active involvement of all stakeholders is essential for successful intervention.

Bandura (1977) developed SCT. The theory postulates that learning occurs in a social context with a dynamic and reciprocal interaction of the person, environment, and behaviour. The unique feature of SCT is its emphasis on social influence and external and internal social reinforcement. SCT considers how individuals acquire and maintain behavior. The theory bears that a person's past experiences and social environment factors lead to reinforcements or expectations, influencing whether a person will engage in a specific behavior and the reasons for doing so.

HBM was developed by Rosentock in the 1950s and subsequently refined in 1974 and 1988. It is based on the idea that behavior results from how people perceive their environment, which determines their behavior. It is the most commonly used theory in health research. The key constructs of the model are perceived seriousness, perceived susceptibility, perceived severity, perceived benefits and perceived barriers, and perceived cues to action. The HBM offers a structured framework for understanding how beneficiaries assess the value of MCH interventions. It provides insights into decision-making and health-seeking behaviour.

Another approach, the theory of Planned Behavior (TPB), was developed and refined by Ajzen (1985, 1987, 1991) and emphasizes the role of intention as a determinant of behavior. TPB incorporates constructs such as attitudes toward behavior, subjective norms, and behavioral control, highlighting the social and environmental factors influencing decision-making.

The HBM was chosen for this study due to its strong emphasis on individual health perceptions, which align closely with the research focus on how beneficiaries perceive and engage with MCH interventions.

The theoretical approach rooted in ST, SCT and HBM provides a structured lens to analyze beneficiaries' health-related perceptions and health-seeking behaviors. The research design explained in the following section, shapes the methodological approach to data collection and interpretation.

4. Methodology

4.1 Research Design

Given the current study's focus on understanding the world in which we work and live—specifically, beneficiaries' views of MCH interventions—the research was grounded in a social constructivist (interpretivist) framework. It is a research paradigm that emphasizes understanding individuals' subjective experiences and socially constructed realities. It focuses on how people interpret and give meaning to their world, emphasizing the role of context, culture, and social interactions in shaping perceptions and knowledge.

The social constructivist framework was particularly fitting for this study, as it is well-suited for exploring views and perceptions, which can then be utilized to develop a process or framework for action.

- *Qualitative Approach*

Given that the research questions of this study sought to understand birthing mothers' perceptions in their cultural and social context, a qualitative approach was more suited for gaining this understanding. This approach is suited for capturing beneficiaries' lived experiences, allowing for a rich and contextual understanding that aligns with the study's objectives. It helps generate meaningful insights into how NGOs design their interventions and how beneficiaries engage with and perceive them. Within this qualitative approach, a case study method was employed. Each NGO from which data was collected was treated as a distinct case, allowing for a detailed exploration of cultural dynamics and factors that shape beneficiaries' perceptions. The case study method facilitated the collection of rich, descriptive data through in-depth interviews, which were analyzed to uncover patterns, themes, and insights. This approach is essential for answering the why and how type of research questions.

- *Multiple Case Studies Method*

The explicit type of case study method used in this research is the multiple case study method. This study's multiple case study method aligned with the research goals of exploring varied NGO interventions and beneficiary perspectives across diverse contexts in India. This method allows the researcher to benefit from single case studies plus the advantage of comparing cases in different settings, leading to better understanding. This study chose four states, i.e., Maharashtra, Gujarat, Rajasthan and Madhya Pradesh, to represent different geographic, demographic, and sociocultural settings. Further, the cases selected had a mix of rural, urban and tribal populations. The researcher explored whether findings from one case held true in other cases, thus increasing the robustness of the research by identifying patterns or distinctions across cases. Since the research aimed to

understand the sociocultural influences on MCH interventions, studying multiple NGOs allowed the researcher to analyze information for comparative analysis within and across multiple cases to understand the similarities and differences. The multiple case study method was well-suited for exploring various stakeholders' roles, perspectives, and interactions (beneficiaries, government bodies) in the MCH ecosystem. Each case offered a unique perspective, contributing to a broader understanding of stakeholder dynamics across different settings.

4.2 Sample Selection

Qualitative research adopts purposive sampling to generate cases. To select the cases for this study, the researcher first examined the MMR of Indian states using secondary data from the Sample Registration System. States with both high and low MMR were identified to capture a range of maternal health outcomes. The states of Maharashtra and Gujarat, which have lower MMR, were contrasted with Madhya Pradesh and Rajasthan, which exhibit higher MMR. These states were purposively chosen due to their varying maternal mortality rates to allow for a comprehensive contrast between geographic regions, including urban and rural areas with different MCH outcomes, enriching the analysis. The selection process began by compiling a list of all NGOs registered in the targeted states, established more than ten years ago. To compile the NGOs list, the NGO Darpan Portal maintained by the NITI Aayog database was the primary source for identifying registered NGOs operating within the targeted states. Additionally, reports from rating agencies such as Guidestar India were referred to obtain a comprehensive list of NGOs with a strong reputation for their work in MCH interventions. This approach helped identify NGOs with established credibility and expertise in MCH initiatives. Subsequently, these NGOs were further categorized based on their involvement in MCH interventions for over five years.

This selection process resulted in a study population composed of 45 NGOs meeting the selection criteria. The sampling strategy for this study ensured a maximum variation sampling approach, aiming to capture and describe cases that cut across a diverse range of interventions and programs that allowed for a comprehensive understanding of MCH interventions during the maternity phases by capturing both unique cases and shared patterns. This included variations in geographical location, socioeconomic status, cultural backgrounds, and programmatic approaches. Data was collected from 12 NGOs in the states of Maharashtra, Gujarat, Madhya Pradesh and Rajasthan.

4.3 Tools for Data Collection

Primary data was collected through interviews, Non-Participant Observation (NPO), and archival data from NGO websites, news articles, and Government reports.

- *Interview Guide*

Based on the evidence from the literature review and pilot study, a preliminary semi-structured interview guide was developed. It was further refined based on the feedback received from experts and academicians. The interview protocol was pre-tested, and based on initial interviews, some of the questions in the guide were reworded/ modified to make them more open-ended, and the sequencing of the questions was altered for improved coherence. The researcher refined the questions iteratively over the data collection period. There were different interview guides for NGO staff, beneficiaries, healthcare professionals, and para professionals.

- *Non Participant Observation (NPO) Guide*

Drawing from existing literature on observation methods and based on the study's objectives, an NPO guide was prepared to collect data. It was designed to capture details

about the setting, interactions, and behaviors. The participants included beneficiaries, healthcare workers, and NGO staff, ensuring the researcher remained unobtrusive during observations. It was refined in consultation with experts and in alignment with the study's framework. It included observation points such as the physical environment, interactions, body language, and signs of discomfort or satisfaction.

4.4 Data collection

- Primary Data Sources

Interviews

Primary data were collected from different sources. A total of sixty-seven interviews were conducted between August 2023 and April 2024 from a sample of 12 cases with NGO staff, beneficiaries, community members and healthcare professionals/para professionals.

Non Participant Observation (NPO)

NPO is a field approach to gathering data in which the researcher enters a specific site for purposes of engagement or observation. This study applied NPO as a data collection method to complement interviewing. While interviewing helped the researcher understand how people make sense of their worlds, observing them helped to comprehend how they act and behave in a specific situation. Secondary data collection

- Archival Data Sources

The research used multiple archival data sources to conduct this study. Government reports such as NFHS, MMR, and Five Year Plans were reviewed to provide a broad picture of the maternal health situation in the country. Data from NGO websites and news articles were collected. Information available in the public domain and websites were used to source secondary data for data triangulation. While the researcher did not code the secondary data, it was reviewed before and after the interviews to help corroborate the interview data.

5. Data Analysis

Data analysis was followed through stages adapted from Creswell (2014). The researcher took a reflexive approach to data analysis, which required the researcher to reflect on own assumptions, biases, and values that might influence the research (Braun & Clarke, 2021; Ely et al., 2022). The researcher engaged in identifying themes, emphasizing her role as an active agent rather than assuming themes exist objectively within the data. Combining data from semi-structured interviews resulted in 68,745 words. The total recording of all interviews was 549 minutes. Each interview was assigned a code to ensure confidentiality. All data were organized into separate electronic folders. Following the protocols by Alam, 2021, NVivo® version 14 software was used to code and analyze the data. The data analysis process was built upon the procedure prescribed in the qualitative methodology (Gioia et al., 2013). Coding was based on the overarching themes that the researcher would expect to find based on the extant literature and the theoretical perspectives guided by Stakeholder Theory (1984), Social Cognitive Theory (1986), and the Health Belief Model (1974). Reflective notes, field notes, and non participant observation notes were used during this process as they allowed the researcher to capture ideas and insights while generating the codes. The number of first-order codes at the initial stage ranged from 150 -200 for each NGO. As suggested by Strauss & Corbin, 1998 and Locke et al., 2022, a coding approach was used as the first step, whereby interview data were coded using *in vivo* words and statements used by the informants in their own terminology and language. The researcher identified aggregate analytical dimensions or categories that proposed theoretical linkages between second-order themes.

The researcher also applied a constant comparative method for data analysis. This involved comparing each interpretation or finding obtained from the data with existing findings.

First-order codes, second-order codes, and aggregate dimensions were derived from the data to develop categories for a framework and theoretical model at various levels of theoretical abstraction. Their cultural and social context was identified based on emerging categories of interventions that evolved from the data. The researcher conducted an in-depth analysis involving both within- and cross-case analyses (Miles & Huberman, 1994). In the current study, data triangulation is achieved by converging multiple data sources to generate themes and categories (Creswell & Miller, 2000; Eisenhardt, 1989; Yin, 2013). Experts' opinions were sought to validate the findings.

6. **Findings and Discussion**

RQ 1: What specific interventions do NGOs implement for MCH?

The first research question guiding the study aimed to understand what interventions NGOs implement to improve MCH. To answer this question, the researcher conducted a within-case analysis and examined every Case individually, studying their interventions, interviewees' insights, and descriptions through words and written texts to discover their meanings. Regional adaptations in implementing interventions, as well as their scope and execution, were observed. Within-case analysis and reporting of case studies were done, and the researcher identified commonalities and uniqueness in interventions (The details of each case are given in the thesis). Despite the diversity in geographical and cultural settings, Case organizations exhibited a convergence of approaches to improve MCH. Following the data collection, Cross-case analysis shows that MCH interventions implemented by NGOs had strong evidence of their effectiveness in common, but they varied widely in their focus—from awareness to nutrition to ANC-PNC visits to behavior change communication for birthing mothers.

Building on the cross case analysis, the study further examines MCH interventions implemented by NGOs across states with varying MMR to make a comparative analysis and maintain heterogeneity in the sample. Maharashtra and Gujarat have low MMR, while Rajasthan and Madhya Pradesh have high MMR, which enabled the researcher to observe differences in the type of interventions and how they are implemented. By understanding these differences, policymakers can customize interventions to bridge the gap between high and low MMR states. The key differences observed are as follows:

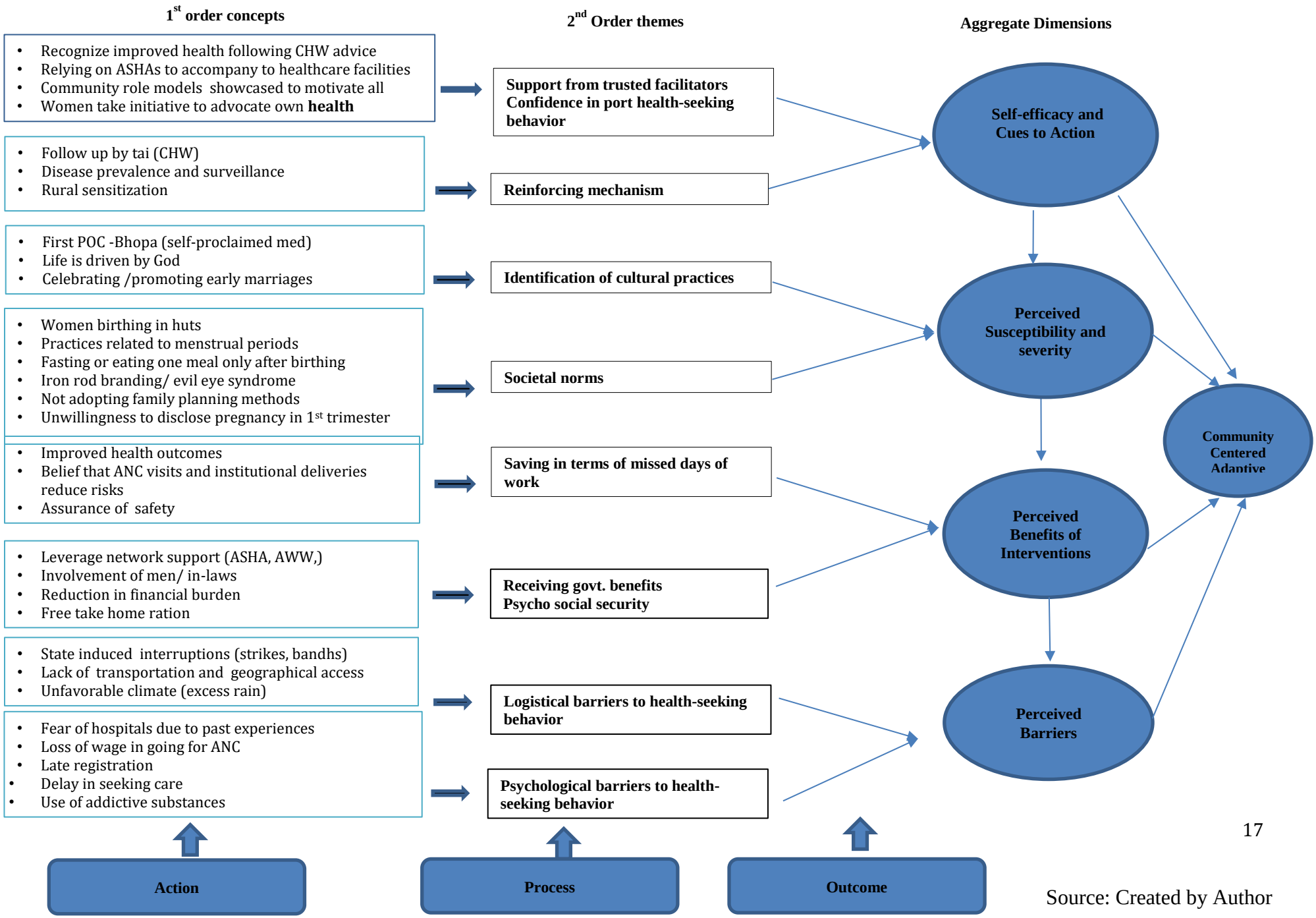
Stronger healthcare infrastructure in low MMR states provides better access to pre and post-natal services, such as immunization, sonography, and institutional birthing. Conversely, high MMR states reported significant infrastructure challenges, such as long travel distances for basic tests. A Rajasthan respondent noted, *"Women have to travel 45 km for sonography; often, they return without getting the test done."*

RQ2: How does the socio-cultural context shape the strategies of NGOs implementing MCH interventions?

The insights gained into various MCH interventions implemented by NGOs during different stages of maternity in urban and rural geographies provide a foundation for examining the contextual factors that shape these interventions. Through the Gioia analysis framework, (as shown in Figure 1) several insights have emerged highlighting how NGOs adapt their programs to align with local beliefs, practices, and sociocultural dynamics. These adaptations span across program design, delivery mechanisms, resource allocation, and monitoring, ensuring the interventions resonate with the communities they serve. The research examined the cases jointly to compare participants' experiences, insights, and descriptions across cases and find repeated patterns in their meaning. Once these repeated

patterns were found, they were linked with the theoretical perspectives in the literature to build logical arguments.

Figure 1: Themes and Dimensions Analyzed through The Gioia Technique,


1st order concepts
2nd Order themes
Aggregate Dimensions
Recognize improved health following CHW advice
Relying on ASHAs to accompany to healthcare facilities
Community role models showcased to motivate all
Women take initiative to advocate own health
Support from trusted facilitators
Confidence in port health-seeking behavior
Self-efficacy and Cues to Action
Follow up by tai (CHW)
Disease prevalence and surveillance
Rural sensitization
Reinforcing mechanism
First POC -Bhopa (self-proclaimed med)
Life is driven by God
Celebrating /promoting early marriages
Identification of cultural practices
Perceived Susceptibility and severity
Women birthing in huts
Practices related to menstrual periods
Fasting or eating one meal only after birthing
Iron rod branding/ evil eye syndrome
Not adopting family planning methods
Unwillingness to disclose pregnancy in 1st trimester
Societal norms
Community Centered Adaptive
Improved health outcomes
Belief that ANC visits and institutional deliveries reduce risks
Assurance of safety
Saving in terms of missed days of work
Perceived Benefits of Interventions
Leverage network support (ASHA, AWW,)
Involvement of men/ in-laws
Reduction in financial burden
Free take home ration
Receiving govt. benefits
Psycho social security
State induced interruptions (strikes, bandhs)
Lack of transportation and geographical access
Unfavorable climate (excess rain)
Logistical barriers to health-seeking behavior
Perceived Barriers
Fear of hospitals due to past experiences
Loss of wage in going for ANC
Late registration
Delay in seeking care
Use of addictive substances
Psychological barriers to health-seeking behavior
Action
Process
Outcome

Source: Created by Author

Using the Gioia analysis framework (Figure 1), several themes emerged that describe how NGOs adapt their programs to align with local sociocultural dynamics. These adaptations include program design, delivery mechanisms, support system, and monitoring processes. The Gioia diagram visually represents the relationships between first-order concepts, second-order themes, and aggregate dimensions, offering a structured pathway from raw data to theoretical insights.

These adaptations are summarized and elaborated upon as follows:

- Program Design:
    - Deploying culturally sensitive staff (appoint local female healthcare workers).
    - Alignment with cultural and social norms
    - Respect for traditional practices (health driven by God, traditional norms in birthing practices)
    - Culture appropriate interventions
- Program delivery
    - Community Engagement
    - Involving community and religious leaders
    - Implementing participatory approaches
- Support System
    - Healthcare provided by female staff only
    - Tribal community workers in required geographies
    - Involving spouses and family members
- Monitoring and Feedback
    - House-to-house surveillance and monitoring

- Adapting their approaches based on feedback from beneficiaries to improve cultural fit and operational efficiency

RQ3: How do beneficiaries perceive MCH interventions implemented by NGO?

The beneficiaries' perceptions of MCH interventions NGOs implement are shaped by sociocultural factors leading to tangible and intangible benefits within their communities. Additionally, fulfilling beneficiaries' felt needs and building social capital strengthens these perceptions by building trust and collective ownership of health outcomes. Beneficiaries perceive MCH interventions as effective and relevant when they receive tangible and intangible benefits.

- *Tangible Benefits*

Tangible benefits are perceived as highly valued as they directly address physical needs. They directly address perceived barriers, such as distance to healthcare facilities and lack of resources, making healthcare interventions more accessible and appealing. Tangible benefits include the following:

- Improved health outcomes include reduced risk of complications, early detection of high-risk cases, and managing conditions like anaemia, malnutrition, and gestational diabetes. Access to skilled gynaecologists/birth attendants and emergency obstetric care is a tangible benefit that leads to safe birthing and healthy newborns.
- Access to Healthcare: It includes monitoring the health of mother and baby during pregnancy through regular checkups. Support for reaching healthcare facilities, especially in remote areas, through ambulatory services and being accompanied by ASHA workers.
- Financial benefit: Reduced medical expenses through free or subsidized healthcare services. Other benefits include free newborn vaccination, iron-folic supplements and tetanus vaccination for expecting mothers. Free distribution of essential medicines and supplies.

- Maternal and Child Nutrition: Nutritional counselling on healthy eating habits during pregnancy and breastfeeding. Distribution of supplements and take-home ration. Cooking demonstrations of nutritious food for the mother and developing baby.
- *Intangible Benefits*

Intangible benefits also play a significant role in shaping perceptions. The intangible benefits inclue:

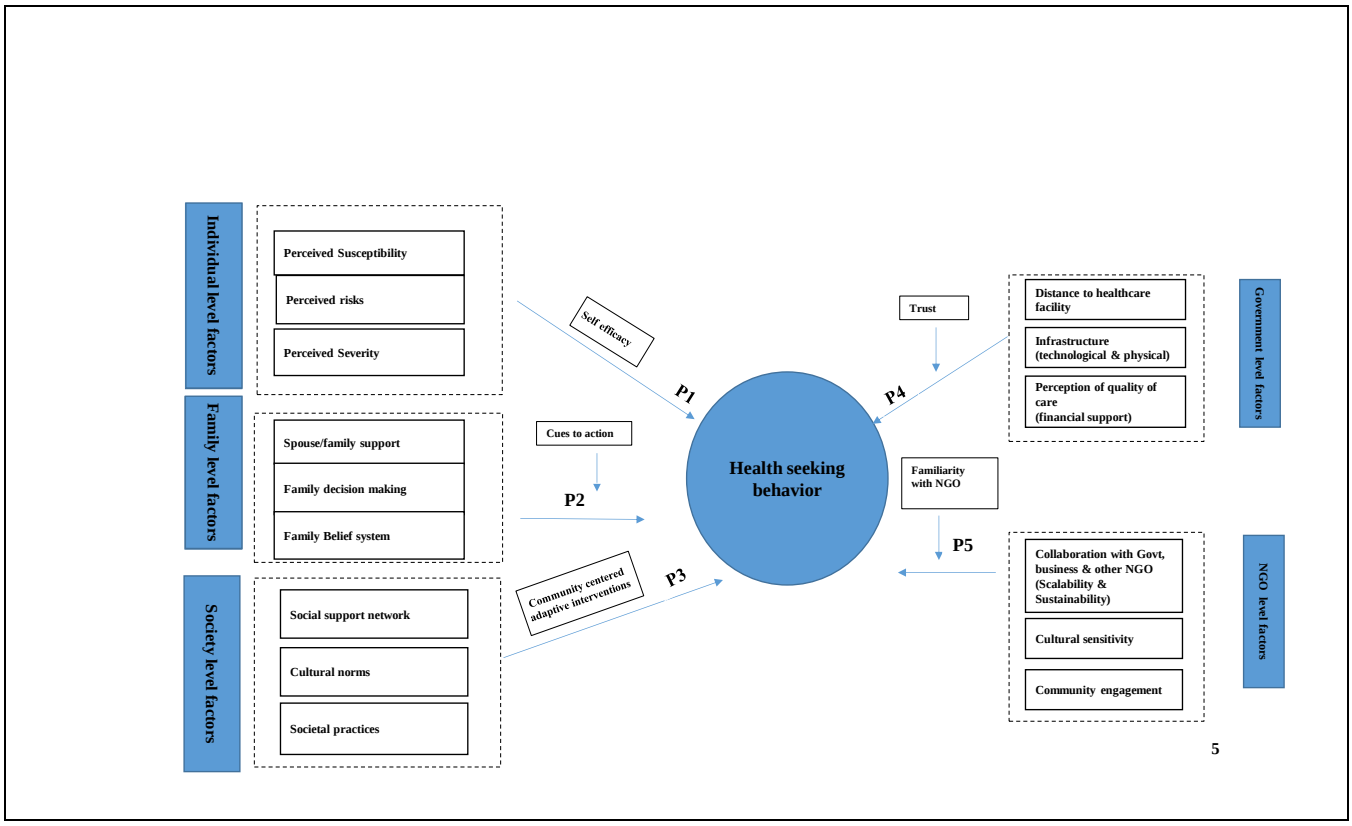
- Empowerment: Increased knowledge and decision-making: Education on pregnancy, childbirth, and childcare empowers women to make informed choices.
- Improved self-confidence: Support and guidance can increase birthing mothers' self-efficacy in caring for themselves and the baby.
- Emotional support: Access to counsellors and support groups reduced anxiety and stress related to pregnancy. Knowing that self and baby's health is monitored provides a sense of security.
- Increased social support: Access to community networks and support groups reduced social isolation and provided a sense of belonging. Beneficiaries appreciate the emotional support provided by NGO staff, the reassurance of consistent monitoring, and the trust established through culturally sensitive approaches, such as employing female healthcare workers and respecting traditional beliefs. These aspects bring a sense of safety.
- *Social Capital*

Social capital is the network of people who live in a particular community or society with shared norms, enabling them to work collaboratively and access shared resources for mutual benefit. It emphasizes the value of social connections and trust within the community. It facilitates collective action and exchange of information.

It is an enabler for MCH outcomes. It influences how beneficiaries perceive MCH interventions. Beneficiaries are more likely to utilize and follow health awareness information when it is received from trusted sources, such as Patils (village heads) or religious leaders. Through their MCH interventions, NGOs develop strong social ties within the community to spread awareness regarding the importance of prenatal care, safe delivery practices, and postnatal care. The doorstep support provided by the NGOs through CHW, group meetings and counselling provides pregnant women with essential emotional, informational, and practical support. This support encourages women to seek healthcare, adhere to recommended practices, and cope with the challenges of pregnancy and childbirth. It empowers women to make informed decisions about their reproductive health, develop scientific perspective, challenge cultural barriers hindering healthcare access, create better eco-system support (engagement of spouses, in-laws and communities to help pregnant women) and mobilize communities to advocate for better maternal healthcare services. As evident in self-help groups, when birthing mothers are encouraged to have ANC visits or financial support is facilitated for healthcare expenses, it enhances the perception of MCH intervention.

After integrating insights from qualitative research and theories such as the HBM, SCT, and ST, the factors influencing health-seeking behavior in MCH are condensed into a conceptual model, christened "Matru Shakti Model", as shown in Figure 2. It highlights five dimensions influencing health-seeking behavior in MCH. It demonstrates the connection between individual, family, societal, governmental, and NGO level-related factors. Understanding these dynamics is essential to designing effective, culturally sensitive interventions. The model highlights five levels: (i) individual level, (ii) family level, (iii) societal level, (iv)NGO level, and (v) government level as explained in the following section

Figure 2: Conceptual Model: Matru Shakti Model



Source: Created by author

Individual-Level Factors:

These factors include beneficiaries' perceptions of susceptibility, severity, and risks associated with maternal and child health issues. They interact with interventions to influence health-seeking behaviors. For example, a mother who perceives herself as susceptible to weakness may prioritize seeking an ANC visit.

Family-Level Factors:

Family dynamics, including spousal and extended family support, significantly influence health-seeking behaviors. Culturally aligned belief systems and shared decision-making processes enhance the

acceptability of interventions. Families that value preventive care are more likely to support timely health-seeking actions.

Societal-Level Factors:

Community norms, social networks, and traditional practices shape beneficiaries' health-seeking behaviors. Cultural norms around childbirth and maternal care often dictate the extent to which families engage with healthcare services. NGOs often engage with community leaders to align interventions with prevailing societal norms.

Government-Level Factors:

Structural and systemic aspects, such as access to healthcare facilities, infrastructure, and government collaborations, play an important role. NGOs often collaborate with government agencies to ensure resource allocation, capacity building, and policy alignment. Road connectivity remains a cornerstone for improving access to healthcare in remote areas. Adequate ambulatory and road networks ensure timely access to healthcare facilities, especially during emergencies. Further, government initiatives integrated with other social welfare programs such as livelihood, financing, and skill development, are essential. For example, linking MCH interventions with women's self-help groups promotes financial independence and better health outcomes. Social welfare programs focusing on farming and nutrition indirectly support MCH by addressing food security and income stability. Recognizing the role of traditional healing practices, the government can integrates alternative medicine systems, such as Ayurveda and homeopathy, into MCH strategies. This approach resonates with cultural preferences and enhances healthcare acceptance. Technological Advancements such as digital platforms enable beneficiaries to schedule appointments, access teleconsultations, and receive health education.

NGO-Level Factors:

NGOs act as intermediaries, bridging gaps between beneficiaries and the healthcare system. They implement culturally sensitive programs, deploy female health workers, and emphasize community engagement. The familiarity beneficiaries have with NGO staff often translates into higher trust and adherence to interventions. However, their role goes beyond immediate MCH service delivery, encompassing sustainability, scalability, and technological integration to enhance the reach. For instance, equipping CHW with mobile apps and automated voice messaging in the local language to provide reminders for ANC visits, vaccination, and nutritional guidance ensures adherence. Scalability is achieved by replicating standardized intervention models in different geographies. NGOs document best practices and engage with governmnet to enable large scale implementation.

Theme 1 Risk perception drives behaviour change

Proposition 1 (P1): A sense of self-efficacy in health-seeking behavior emerges when individual factors (perceived risks, susceptibility and severity) interact with targeted MCH interventions.

Theme 2 Family as a determinant and reinforcer of healthcare behavior

Proposition 2 (P2): Family support, inclusive decision-making, and culturally aligned belief systems collectively enhance beneficiaries' health-seeking behaviors.

Theme 3: Community engagement as a bridge to health-seeking behaviors

Proposition 3 (P3): Community engagement strategies employed by NGOs create a bi-directional connection between cultural and social norms and health-seeking behavior

Theme 4: NGOs as intermediaries between beneficiaries and the Government

Proposition 4 (P4): NGOs serve as catalysts in cultivating trust between beneficiaries and the Government by addressing felt needs and systemic gaps, acting as a bridge to overcome infrastructural and access-related barriers.

Theme 5: Beneficiaries' engagement with interventions is linked to familiarity with NGO *Proposition 5 (P5): Better engagement with healthcare interventions and adherence is a function of familiarity with NGO staff.*

7. Conclusion

The study contributes to the growing body of knowledge on MCH interventions, particularly in India, where NGOs are crucial in bridging gaps left by underfunded public health systems. Focusing on the interventions implemented by NGOs, this research provides valuable insights into how NGOs implement these interventions and how beneficiaries perceive their effectiveness. Moreover, the study aligns with the target 3.1 of SDG set by the United Nations, which aims to reduce the global maternal mortality ratio to less than 70.

The findings of this research have significant policy implications for both governmental and non-governmental stakeholders involved in MCH. By identifying effective MCH interventions and understanding the sociocultural factors influencing their success, the study provides policymakers with recommendations for designing more targeted and contextually relevant interventions. The insights gathered would encourage businesses to invest in scalable, impactful MCH interventions utilizing CSR funds. Furthermore, In this theoretical contribution, the researcher argues for a re-interpretation of the

HBM in the context of pregnancy, shifting the focus from fear-based motivation to a proactive approach as pregnancy is a happy state . This re-interpretation involves rethinking the key constructs of the HBM—perceived susceptibility, perceived severity, and perceived risk—through a lens that emphasizes a promise of positive health behaviors. Doing so can better support pregnant and birthing women in making informed and healthy decisions throughout their pregnancy journey.

8. Implications

The study underlines the importance of NGO-led interventions in addressing MCH challenges in India. NGOs can design and implement more effective strategies by incorporating sociocultural factors and beneficiary perceptions.

8.1 Theoretical Implications

Extending HBM

- The study highlights the need to reinterpret constructs like perceived susceptibility and severity in the context of pregnancy. Rather than emphasizing risk, these constructs can be positioned as a promise for positive health behaviors, which aligns with blissful pregnancy rather than fear and vulnerability.
- The HBM does not consider external factors like economic constraints, information asymmetry and infrastructural barriers. Incorporating these dimensions aligns the model more closely with the actual scenario.
- The assumption that cues are universally effective must be revisited, as people do not always exhibit rational behavior.

Integration of stakeholder theory and cultural dynamics

The findings emphasize that stakeholder engagement must include cultural and social considerations, extending the application of Stakeholder Theory to health interventions in diverse culturally grounded settings.

8.2 Managerial Implications

Culturally Aligned Program Design:

- NGOs and healthcare organizations should design awareness communication and MCH interventions that are culturally fit.

Leveraging Family and Community Support:

- Health programs should actively involve family members and community influencers as they are significant participant and reinforce health-seeking behavior.
- NGOs should act as bridges between communities and government health services, addressing systemic gaps and facilitating access to schemes.

8.3 Societal Implications

Empowering communities

- By integrating health interventions with culturally accepted norms and other felt needs, NGOs and policymakers can empower communities to take ownership of MCH
- Culturally aligned programs can improve health equity, and inclusion will likely strengthen the healthcare ecosystem.

- Engaging communities in health interventions can strengthen collaboration and trust, leading to stronger social support networks.

8.4 Implication for Policymakers

Policy makers play a central role in addressing the healthcare needs of tribal, rural, and urban populations, each facing different challenges arising from varied sociocultural, geographical, and economic contexts. The following section outlines key implications for policy makers in the context of tribal, rural, and urban populations

- ***Implications for Urban Context***

Upgrading facilities to address the issue of overcrowding and long waiting time. Optimum infrastructure to ensure healthcare facilities are equipped to provide essential maternal care, such as routine checkups, safe deliveries, and emergency care. Timely refresher clinical training must be provided to keep skills up-to-date on prenatal, delivery, and postnatal care, emphasizing managing complications. Since the urban population consists of a large number of migrant workers who are devoid of many services and social benefit schemes because they lack proper documentation or permanent residential addresses. Policies should be inclusive to allow access and benefits to such migrants. Additionally, targeted interventions for marginalized groups in urban slums, such as mobile health clinics and subsidized care programs, can help address MCH in densely populated areas.

- ***Implications for Rural Context***

Strengthening PHCs: PHCs are the backbone of community-based healthcare in rural areas. Many rural communities perceive PHCs as lacking in capacity, supplies, infrastructure, and rampant absenteeism and hence do not rely on them. To work efficiently, PHCs must be reinforced with adequate resources,

infrastructure, and skilled personnel. It is important to make MCH services available at facilities within walkable distance from communities so that women can receive prenatal, birthing, and postnatal care close to home. As the issue of casteism is rampant in rural communities, local health committees can be formed with representatives from various community segments to voice needs and feedback. This will ensure inclusivity. Further, for awareness and behaviour change, communication use of local languages, culturally relevant analogies, and visual aids can be maximized. It is equally important to build a strong referal system that seamlessly links PHCs with higher-level healthcare facilities, such as district hospitals, in cases requiring advanced care. Transportation support and emergency response units can be deployed as transportation is often a critical barrier in rural areas.

- ***Implications for Tribal Context***

In regions with significant tribal populations, policymakers can adapt their models to overcome geographical isolation and cultural barriers. To improve MCH, policymakers can decentralize healthcare, which will enable them to customize services and resources to meet the unique requirements and problems of their community. Decentralization means granting local healthcare facilities and staff increased autonomy over financial and human resources and expanded authority to deliver a broader range of services. Decentralization can improve MCH outcomes as a decentralized system is likely more responsive, efficient, and cost-effective. For decentralization to succeed, the active participation of local communities is essential. Engaging community members in the planning, monitoring, and evaluating of MCH services. Involving communities will help them leverage their knowledge to identify high-risk cases, promote health-seeking behavior, and educate women and families about available MCH services. Mass awareness programs, community fairs, and participatory games can create a shared understanding of health-seeking behaviour.

9. Limitations

This study focuses on MCH interventions implemented by NGOs, excluding others involving government-led or private-sector initiatives limiting the scope to broader ecosystem of MCH interventions. Future research could expand the scope to include a comparative analysis of interventions across multiple sectors to provide a more holistic understanding. Since the study is based in an Indian context and is limited to four states, it may not fully capture the diversity of India's healthcare landscape. This may have limitations concerning the study's transferability into other LMICs. Other limitations of this study are similar to those encountered in and common to all qualitative studies. Qualitative research is inherently interpretive, and while every effort (triangulation of data sources, peer debriefing, and robust coding) was made to reduce the bias in data gathering, some degree of researcher bias in data interpretation cannot be totally eliminated. Limitations of the current study can be reduced in future research studies.

10. Future research

In this study, the researcher conducted qualitative research to develop a model that includes multiple stakeholders- policymakers, beneficiaries and practitioners. This framework can serve as a foundation for future research, aiming to validate it through empirical testing. Field experiments can be conducted to check whether the framework accurately reflects real-world behavior. Another extension of work is to develop scales for measuring MCH health-seeking behavior. It will allow scholars to quantify results. Future work can be conducted in broader Indian geography and other emerging economies.

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